

## SAFETY DATA SHEET

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1 Product identifiers

Product name Sodium Hydroxide 0.5M Solution  
CAS number 1310-73-2  
Synonyms N/A

#### 1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses Laboratory chemicals.

#### 1.3 Details of the supplier of the safety data sheet

Company Lab Alley, LLC  
12501 Pauls Valley Road  
Austin, Texas 78737  
U.S.A.  
Telephone 512-668-9918  
Fax 512-886-4008

#### 1.4 Emergency telephone

Emergency Phone # US & Canada: 1-800-535-5053 INFOTRAC  
International 1-352-323-3500 INFOTRAC

### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

##### GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

|                                   |            |
|-----------------------------------|------------|
| Skin Irritation/Corrosion         | Category 2 |
| Serious Eye Damage/Eye Irritation | Category 2 |
| Corrosive to metals               | Category 1 |

#### 2.2 GHS Label elements, including precautionary statements

Pictogram



Signal Word

Warning

Hazard statements

Causes skin irritation.  
Causes serious eye irritation.  
May be corrosive to metals.

Precautionary statements

Prevention: Wash face, hands and any exposed skin thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection. Keep only in original container.

IF ON SKIN/HAIR: : Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Spills: Absorb spillage to prevent material damage.

Storage: Store in corrosive-resistant polypropylene container with a resistant inliner.

### 2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

None identified.

## SECTION 3: Composition/information on ingredients

### 3.1 Components

| Chemical name    | Common name and synonyms | CAS number | Concentration |
|------------------|--------------------------|------------|---------------|
| Sodium Hydroxide | Caustic soda             | 1310-73-2  | 2.46%         |
| Water            | Aqua; H <sub>2</sub> O   | 7732-18-5  | 97.54%        |

## SECTION 4: First aid measures

### 4.1 Description of first-aid measures

#### General advice

#### If inhaled

Remove to fresh air; give artificial respiration if breathing has stopped. Get medical advice/attention if you feel unwell.

**In case of skin contact** Corrosive. If on skin (or hair), take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before re-use. If skin irritation occurs, get medical advice/attention.

**In case of eye contact** Corrosive. If in eyes, rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, get medical advice/attention.

**If swallowed** Clean mouth with water and drink afterwards plenty of water.

#### 4.2 Most important symptoms and effects, both acute and delayed

Causes burns by all exposure routes. Ingestion causes severe swelling, severe damage to the delicate tissue, and danger of perforation.

#### 4.3 Indication of any immediate medical attention and special treatment needed

If symptoms persist, call a physician and treat symptomatically.

### SECTION 5: Firefighting measures

#### 5.1 Extinguishing media

**Suitable extinguishing media** Dry chemical, Carbon dioxide, alcohol foam, water.

**Unsuitable extinguishing media** No information available.

#### 5.2 Specific hazards arising from the substance or mixture

Thermal decomposition can lead to release of irritating gases and vapors. Corrosive material. Causes burns by all exposure routes. Hazardous Combustion Products: Sodium oxides.

#### 5.3 Special protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

#### 5.4 Further information

**Flash Point** No information available.

**Autoignition Temperature** No information available.

##### Explosion limits

**Upper** No information available.

**Lower** No information available.

**Sensitivity to Mechanical Impact** No information available.  
**Sensitivity to Static Discharge** No information available.

**NFPA**

| Health | Flammability | Instability | Physical hazards |
|--------|--------------|-------------|------------------|
| 3      | 0            | 0           | COR              |

**SECTION 6: Accidental release measures**

**6.1 Personal precautions, protective equipment and emergency procedures**

Ensure adequate ventilation. Use personal protective equipment as required.

**6.2 Environmental precautions**

Prevent release into the environment.

**6.3 Methods and materials for containment and cleaning up**

Soak up with inert absorbent material. Keep in suitable, closed containers for disposal.

**6.4 Reference to other sections**

See section 2 for full list of hazard and precaution statements. See Section 12 for additional Ecological Information.

**SECTION 7: Handling and storage**

**7.1 Precautions for safe handling**

**Precautions on safe handling**

Wear personal protective equipment/face protection. Do not get in eyes, on skin, or on clothing. Ensure adequate ventilation. Avoid ingestion and inhalation.

**Hygiene measures**

Handle in accordance with good industrial hygiene and safety practice.

**7.2 Conditions for safe storage, including any incompatibilities**

**Storage conditions**

Keep containers tightly closed in a dry, cool, and well-ventilated place. Corrosives area.

**Incompatibilities**

Acids. Organic materials. Metals. Aluminium. Copper.

**SECTION 8: Exposure controls/personal protection**

**8.1 Occupational exposure limits**

**US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)**

| Component | Type | Value |
|-----------|------|-------|
|-----------|------|-------|

|                  |         |         |
|------------------|---------|---------|
| Sodium Hydroxide | PEL-TWA | 2 mg/m3 |
|------------------|---------|---------|

#### US. ACGIH Threshold Limit Values

| Component        | Type    | Value           |
|------------------|---------|-----------------|
| Sodium Hydroxide | PEL-TLV | 2 mg/m3 Ceiling |

#### US. NIOSH: Pocket Guide to Chemical Hazards

| Component        | Type    | Value    |
|------------------|---------|----------|
| Sodium Hydroxide | IDLH    | 10 mg/m3 |
| Sodium Hydroxide | Ceiling | 2 mg/m3  |

#### Biological occupational exposure limits

No information available.

## 8.2 Exposure controls

### Appropriate engineering controls

Ensure that eyewash stations and safety showers are close to the workstation location.

### Personal protective equipment

#### Eye/face protection

Tight sealing safety goggles.

#### Skin protection

Wear appropriate protective gloves and clothing to prevent skin exposure.

#### Body Protection

Wear appropriate protective gloves and clothing to prevent skin exposure.

#### Respiratory protection

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Recommended Filter type: Particulates filter conforming to EN 143.

#### Control of environmental exposure

No information available.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

Physical State

Liquid

|   |                          |
|---|--------------------------|
| Appearance                                | Colorless                |
| Odor                                      | Odorless                 |
| Odor Threshold                            | No information available |
| pH  | > 12                     |
| Melting Point/Range                       | > 0 °C / 32 °F           |
| Boiling Point/Range                       | > 100 °C / 212 °F        |
| Evaporation Rate                          | No information available |
| Flammability (solid)                      | No information available |
| Flammability or explosive limit           | No information available |
| Upper                                     |                          |
| Lower                                     |                          |
| Vapor Pressure                            | No information available |
| Vapor Density                             | No information available |
| Density                                   | 1.0 g/cm <sup>3</sup>    |
| Solubility                                | Soluble in water         |
| Partition coefficient;<br>n-octanol/water | No information available |
| Autoignition Temp                         | No information available |
| Decomposition Temp                        | No information available |
| Viscosity                                 | No information available |
| Molecular Formula                         | NaOH                     |
| Molecular Weight                          | 39.9971 g/mol            |
| VOC Content(%)                            | No information available |
| Oxidizing properties                      | No information available |

## 9.2 Other safety information

No information available.

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

No information available.

### 10.2 Chemical stability

Stable.

### 10.3 Possibility of hazardous reactions

No information available.

### 10.4 Conditions to avoid

Avoid incompatible materials, exposure to air, and direct contact with acids.

### 10.5 Incompatible materials

Materials Acids, Organic materials, Metals, Aluminium, Copper.

### 10.6 Hazardous decomposition products

Sodium oxides.

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Product Information, Component Information

##### Acute toxicity

| Component        | LD50 Oral           | LD50 Dermal         | LC50 Inhalation |
|------------------|---------------------|---------------------|-----------------|
| Sodium Hydroxide | 140-340 mg/kg (Rat) | 1350 mg/kg (Rabbit) | -               |

##### Skin corrosion/irritation

Causes burns by all exposure routes.

##### Serious eye damage/eye irritation

Causes burns by all exposure routes.

##### Respiratory or skin sensitization

No information available.

##### Germ cell mutagenicity

No information available.

##### Carcinogenicity

| Component        | CAS       | IARC       | NTP        | ACGIH      | OSHA       | Mexico     |
|------------------|-----------|------------|------------|------------|------------|------------|
| Sodium Hydroxide | 1310-73-2 | Not listed | Not listed | Not listed | Not listed | Not listed |

##### Specific target organ toxicity - single exposure

No information available.

##### Specific target organ toxicity - repeated exposure

None known.

##### Reproductive toxicity

No information available.

##### Chronic effects

Ingestion causes severe swelling, severe damage to the delicate tissue, and danger of perforation.

### 11.2 Additional Information

The toxicological properties have not been fully investigated.

## SECTION 12: Ecological information

### 12.1 Toxicity

Large amounts will affect pH and harm aquatic organisms.

| Product          |      | Species             | Test Results          |
|------------------|------|---------------------|-----------------------|
| Sodium Hydroxide | LC50 | Oncorhynchus mykiss | 45.4 mg/L, 96h static |

### 12.2 Persistence and degradability

Soluble in water. Persistence is unlikely based on information available.

### 12.3 Bio accumulative potential

No information available.

### 12.4 Mobility in soil

Will likely be mobile in the environment due to its water solubility.

### 12.5 Results of PBT and vPvB assessment

No information available.

### 12.6 Endocrine disrupting properties

No information available.

### 12.7 Other adverse effects

No information available.

## SECTION 13: Disposal considerations

### 13.1 Waste Disposal Methods

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

## SECTION 14: Transport information

#### DOT (US)

**UN-No** UN1824  
**Proper Shipping Name** SODIUM HYDROXIDE SOLUTION  
**Hazard Class** 8  
**Packing Group** III

#### IMDG

**UN-No** UN1824  
**Proper Shipping Name** SODIUM HYDROXIDE SOLUTION  
**Hazard Class** 8  
**Packing Group** III

#### IATA



|                             |                           |
|-----------------------------|---------------------------|
| <b>UN-No</b>                | UN1824                    |
| <b>Proper Shipping Name</b> | SODIUM HYDROXIDE SOLUTION |
| <b>Hazard Class</b>         | 8                         |
| <b>Packing Group</b>        | III                       |

## SECTION 15: Regulatory information

**US federal regulations** This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

**TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)**

Not applicable.

**CERCLA Hazardous Substance List (40 CFR 302.4)**

Listed, Sodium hydroxide (CAS #1310-73-2), 1000 lb.

**SARA 304 Emergency release notification**

Not regulated.

**OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)**

Not regulated.

**Superfund Amendments and Reauthorization Act of 1986 (SARA)**

**SARA 302 Extremely hazardous substance**

Not listed.

**SARA 311/312 Hazardous**

Listed: Acute Health Hazard.

**SARA 313 (TRI reporting)**

Not listed.

**Other federal regulations**

**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Not regulated.

**Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)**

Not regulated.

**Safe Drinking Water Act**

Listed, Sodium hydroxide (CAS #1310-73-2), 1000 lb.

**FEMA Priority Substances Respiratory Health and Safety in the Flavor Manufacturing Workplace**

Not listed.

**US state regulations**

**US. Massachusetts RTK - Substance List**

Listed, Sodium hydroxide (CAS #1310-73-2).

**US. New Jersey Worker and Community Right-to-Know Act**

Listed, Sodium hydroxide (CAS #1310-73-2).

**US. Pennsylvania Worker and Community Right-to-Know Law**

Listed, Sodium hydroxide (CAS #1310-73-2).

**California Proposition 65**

Not listed.

**SECTION 16: Other information**

Issue date: 12/14/2014

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Revision 2: 10/10/2024

**SECTION 17: Disclaimer**

The information provided on this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.